studied, the neutron spectrum shows a broad log-normal distribution peaking at just under 1 MeV. In a 2 m radius central cavity of a detector with coverage down to $|\eta| = 3$, the average neutron flux is 2×10^{12} cm^{-2}yr^{-1}, including secondary scattering contributions.

Values of A and α are given in Table 12.6 for several relevant situations. A is proportional to $\sigma_{\text{inel}} \int \mathscr{L} dt\, H \langle p_\perp \rangle^\alpha$, so the results can be scaled to other accelerators. (Here H is the height of the pseudorapidity plateau and $\langle p_\perp \rangle$ is the mean transverse momentum.) Examples of scaling to other accelerators are given in Table 12.7 of the full *Review.* That the assumption that all radiation comes from the interaction point does not apply to the present generation of accelerators.

The constant A includes factors evaluated with cascade simulation programs as well as constants describing particle production at the interaction point. It is felt that each could introduce an error as large as a factor of two in the results.

Table 12.6: Coefficients $A/(100\text{ cm})^2$ and α for the evaluation of calorimeter radiation levels at cascade maxima under SSC nominal operating conditions. At a distance r and angle θ from the interaction point the annual fluence or dose is $A/(r^2 \sin^{2+\alpha}\theta)$.

Quantity	$A/(100\text{ cm})^2$	Units	$\langle p_\perp \rangle$	α
Neutron flux	1.5×10^{12}	cm^{-2}yr^{-1}	0.6 GeV/c	0.67
Dose rate from photons	124	Gy yr^{-1}	0.3 GeV/c	0.93
Dose rate from hadrons	29	Gy yr^{-1}	0.6 GeV/c	0.89

* *Dose* is the time integral of *dose rate*, and *fluence* is the time integral of *flux*.

The references are given in the full *Review.*